

IN THE CLAIMS

The current status of the claims is reflected in the below listing of claims.

1. - 29. (Canceled)

30. (Currently Amended) A method for electrolytic deposition of bronze onto a substrate, the method comprising:

(i) immersing the substrate in an aqueous acidic electrolyte having a pH less than about 1 and comprising:

- a) tin ions;
- b) copper ions;
- c) an alkylsulfonic acid;
- d) an aromatic, nonionic wetting agent; and
- e) an oxidation inhibitor;

wherein a ratio of tin ion concentration to copper ion concentration is sufficient to electrolytically deposit a bronze having a copper content of greater than about 60%; and

(ii) applying a current through a copper-tin anode and ~~a cathode~~ **the substrate** at a current density sufficient to electrolytically deposit bronze having the copper content greater than about 60% onto the substrate.

31. (Previously presented) The method of claim 30 wherein the alkylsulfonic acid is present in the electrolyte at a concentration of from 140 to 382 g/L of electrolyte.

32. (Previously presented) The method of claim 30 wherein the alkylsulfonic acid comprises methanesulfonic acid in a concentration of at least about 290 g/L.

33. (Previously Presented) The method of claim 30 wherein the oxidation inhibitor is selected from the group consisting of monohydroxybenzene compounds, polyhydroxybenzene compounds, and a combination thereof.

34. (Previously Presented) The method of claim 30 wherein the electrolyte comprises a dihydroxybenzene compound as the oxidation inhibitor.

35. (Canceled)

36. (Previously presented) The method of claim 30 wherein the aromatic, nonionic wetting agent is present in the electrolyte at a concentration of from about 2 to about 40 g/L.

37. (Previously presented) The method of claim 30 wherein tin methanesulfonate is present in the electrolyte in an amount of from about 5 to about 195 g/L of electrolyte, thereby providing the tin ions at a concentration of from about 2 to about 75 g/L of electrolyte.

38. (Previously presented) The method of claim 30 wherein copper methanesulfonate is present in the electrolyte in an amount of from about 8 to about 280 g/L of electrolyte, thereby providing the copper ions at a concentration of from about 2 to about 70 g/L of electrolyte.

39. - 55. (Canceled)

56. (Previously presented) The method of claim 30 wherein the ratio of tin ion concentration to copper ion concentration is about 40/60.

57. (Previously presented) The method of claim 30 wherein the ratio of tin ion concentration to copper ion concentration is about 20/80.

58. (Previously presented) The method of claim 30 wherein the ratio of tin ion concentration to copper ion concentration is about 10/90.

59. (Previously presented) The method of claim 30 wherein the current density is at least about 7 A/dm².

60. (Previously presented) The method of claim 30 wherein the aromatic, nonionic wetting agent is β -naphthol ethoxylate.

61. - 62. (Canceled)

63. (Currently Amended) The method of claim 30 wherein the aqueous acidic electrolyte consists essentially of:

- a) the tin ions **in a concentration between about 2 g/L and 5 g/L;**
- b) the copper ions **in a concentration between about 2 g/L and about 18 g/L;**
- c) the alkylsulfonic acid;
- d) the aromatic, nonionic wetting agent; and
- e) the oxidation inhibitor.

64. (Currently Amended) The method of claim 30 wherein the aqueous acidic electrolyte consists of:

- a) the tin ions **in a concentration between about 2 g/L and 5 g/L;**

- b) the copper ions in a concentration between about 2 g/L and about 18 g/L;
- c) the alkylsulfonic acid;
- d) the aromatic, nonionic wetting agent;
- e) the oxidation inhibitor;
- f) an aliphatic nonionic wetting agent; and
- g) a stabilizer/complexing agent.

65. (Currently Amended) The method of claim 30 wherein the aqueous acidic electrolyte consists of:

- a) the tin ions in a concentration between about 2 g/L and 5 g/L;
- b) the copper ions in a concentration between about 2 g/L and about 18 g/L;
- c) the alkylsulfonic acid;
- d) the aromatic, nonionic wetting agent;
- e) the oxidation inhibitor; and
- f) a stabilizer/complexing agent.

66. (Currently Amended) The method of claim 30 wherein the aqueous acidic electrolyte consists of:

- a) the tin ions in a concentration between about 2 g/L and 5 g/L;
- b) the copper ions in a concentration between about 2 g/L and about 18 g/L;
- c) the alkylsulfonic acid;
- d) the aromatic, nonionic wetting agent;
- e) the oxidation inhibitor;
- f) a brightener; and
- g) a stabilizer/complexing agent.

67. (Currently Amended) The method of claim 30 wherein the aqueous acidic electrolyte consists of:

- a) the tin ions in a concentration between about 2 g/L and 5 g/L;
- b) the copper ions in a concentration between about 2 g/L and about 18 g/L;
- c) the alkylsulfonic acid;
- d) the aromatic, nonionic wetting agent;
- e) the oxidation inhibitor;
- f) a brightener;
- g) a stabilizer/complexing agent; and
- h) a source of alloying ion selected from the group consisting of zinc ions, bismuth ions, and a combination thereof.

68. - 74. (Canceled)